

Application No. 10/083,996
Amendment dated September 16, 2004
In reply to Office Action of June 17, 2004

Docket No. 1232-4825

REMARKS

Applicant respectfully requests reconsideration of this application in view of the foregoing amendment and following remarks.

Status of the Claims

Claims 1, 3-7, 9,11-13, 18-22 and 24-30 are pending in this application. Claims 1 and 18 are independent. All of the pending claims stand rejected. By this Amendment, independent claims 1 and 18 are amended. No new matter has been added by this Amendment.

Objection

Claims 1 and 28 have been objected to because of informalities. Claims 1 and 28 have been amended as shown above addressing the Examiner's objections.

Applicant respectfully requests that these objections be withdrawn.

Rejection under 35 U.S.C. §102

In paragraph five (5) of the Office Action, claims 1, 3-5, 7, 9 and 13 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,410,804 to Stauffer ("Stauffer").

Independent claim 1 has been amended for further clarification. In particular, amended claim 1 recites an image sensing elements "wherein each light-receiving portions includes first, second and third light-receiving regions ... the width of center portions of the first and second light-receiving regions being wider than the width of center portion of the third light-receiving region, and the width of peripheral portions of the first and second light-receiving regions being narrower than the width of peripheral portion of the third light receiving region." Support for the

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amendment may be found, for example, in Fig. 4 and relevant portions of the original specification (e.g., the paragraph beginning at line 4 of page 18 through line 4 of page 19).

One of the aspects of the invention as featured in amended claim 1 is directed to an image sensor in which an image signal generated by the first light-receiving region matches as close as possible with an image signal generated by the second light receiving region thereby achieving a high-precision result in a correlation calculation using the two image signals. See, also, the first full paragraph of page 19 beginning at line 5.

Applicant notes that Stauffer discloses a two dimensional image panel having a matrix of lenslets 17 and corresponding detectors 20, 21 in Fig. 1. Stauffer shows other types of detectors in Figs. 2, 3 and 4. However, Stauffer's detectors simply do not show or suggest the design concept of the present invention as discussed above, i.e., "the width of center portions of the first and second light-receiving regions being wider than the width of center portion of the third light-receiving region, and the width of peripheral portions of the first and second light-receiving regions being narrower than the width of peripheral portion of the third light receiving region."

Applicant further notes that Stauffer discloses in Fig. 3, four separate detectors. The Examiner states that the left and right quadrants correspond to the first and second light-receiving portions of the present invention, respectively. The Examiner further states that the top and bottom quadrants correspond to the third light-receiving portion. However, the top and bottom quadrants of Stauffer are separated portions each other. Accordingly, there is no width (detector portion) in the central portion of the top and bottom quadrants.

Accordingly, claim 1 is believed neither anticipated by nor rendered obvious in view of Stauffer for at least the reasons discussed above.

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Reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §102(b) is respectfully requested.

Rejection under 35 U.S.C. §103

In paragraph seven (7) of the Office Action, claims 6, 18-22, 24-27 and 30 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Stauffer in view of U.S. Patent No. 6,195,509 to Nakahara ("Nakahara").

Independent claim 18 has been amended as shown above reciting similar features to amended claim 1, i.e., "the width of center portions of the first and second light-receiving regions being wider than the width of center portion of the third light-receiving region, and the width of peripheral portions of the first and second light-receiving regions being narrower than the width of peripheral portion of the third light receiving region."

As discussed above, Stauffer fails to show or suggest at least this aspect of invention of amended claim 18.

Nakahara is cited as disclosing the third light-receiving region of the rejected claims. Applicant notes that Nakahara discloses, in Fig. 2A for example, sensor areas in which the distance measuring areas 1D, 2D and 3D overlap the photometrcing areas 4L, 5L and 6L, respectively. However, Nakahara's sensors does not show or suggest an image sensor design concept of the present invention as discussed above.

Accordingly, independent claim 18 is believed neither anticipated by nor rendered obvious in view of the cited references (i.e., Stauffer and Nakahara), either taken alone or in combination, for at least the reasons discussed above.

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Reconsideration and withdrawal of the rejections of claim 18 under 35 U.S.C. §103(a) is respectfully requested.

Applicant has not individually addressed the rejections of the dependent claims because Applicant submits that the independent claims from which they respectively depend are in condition for allowance as set forth above. Applicant however reserves the right to address such rejections of the dependent claims should such be necessary.

Applicant believes that the application is in condition for allowance and such action is respectfully requested.

AUTHORIZATION

No petitions or additional fees are believed due for this amendment and/or any accompanying submissions. However, to the extent that any additional fees and/or petition is required, including a petition for extension of time, Applicant hereby petitions the Commissioner to grant such petition, and hereby authorizes the Commissioner to charge any additional fees, including any fees which may be required for such petition, or credit any overpayment to Deposit Account No. 13-4500 (Order No. 1232-4825). A DUPLICATE COPY OF THIS SHEET IS ENCLOSED. An early and favorable examination on the merits is respectfully requested.

Respectfully submitted,
MORGAN & FINNEGAN LLP

Dated: September 16, 2004

By: Sungho Hong
Sungho Hong
Registration No. 54,571
(212) 415-8700 Telephone
(212) 415-8701 Facsimile

CORRESPONDENCE ADDRESS:
MORGAN & FINNEGAN L.L.P.
3 World Financial Center
New York, New York 10281-2101

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